

PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Paul Van Venrooij et al. Group Art Unit: 3762
Application No.: 10/008,773 Examiner: George C. Manuel
Filing Date: December 5, 2001 Due Date: N/A
For: Directional Brain Stimulation and Recording Leads

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/Stephen W. Bauer/
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SECOND SUPPLEMENTAL AMENDMENT

Introductory Comments

Please amend the above-identified application as indicated on the attached pages.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

In the Claims:

The current claim set of the application is presented below. Indications as to the status of the claims (“original”, “currently amended”, “canceled”, “new”, etc.) appear in parentheses after the claim number. Deletions are identified in bold with double brackets and strikethrough (e.g. **[[deletion]]**) and new text is identified in bold with underlining (e.g. new language).

Claims 1-88 (canceled).

89. (Currently Amended) An implantable brain stimulation lead comprising:
a substantially cylindrical lead body having a proximal end, a distal end, and a plurality
of substantially ring-like electrodes each having an arc or circumference
extending substantially around the lead body; and
an electrically insulating member extending over at least a portion of the lead body to
cover at least covered portions of the circumference of the electrodes, and
defining a plurality of windows that expose exposed portions of the circumference
of the electrode, thereby increasing directionality of stimulation current delivered
by the electrode, wherein the insulating member is formed as a sleeve-like
member that extends over a portion of the lead body;
wherein at least two windows are defined at different axial and circumferential positions
about the lead body.

90. (Canceled).

91. (Previously Presented) The lead of claim 89, wherein the insulating member is
coated onto the lead body to define the window.

92. (New) The lead of claim 89, wherein the sleeve-like member has a generally
tubular configuration defining a lumen for receiving the lead body.

93. (New) The lead of claim 92, wherein the sleeve-like member is molded to define the plurality of windows.

94. (New) The lead of claim 92, wherein the sleeve-like member is cut to define the plurality of windows.

95. (New) The lead of claim 89, wherein each electrode extends approximately 360 degrees about the lead body.

96. (New) The lead of claim 89, wherein the lead body includes four electrodes, and the insulating member defines four windows.

97. (New) The lead of claim 89, wherein the window has a shape selected from the group consisting of a rectangle, square, oval and circle.

98. (New) The lead of claim 97, wherein the window has a shape selected from the group consisting of a rectangle and a square.

99. (New) The lead of claim 97, wherein the window has a shape selected from the group consisting of an oval and a circle.

100. (New) The lead of claim 99, wherein the insulating sleeve-like member has a generally tubular configuration defining a lumen for receiving the lead body.

101. (New) The lead of claim 101, wherein the sleeve-like member is molded to define the window.

102. (New) The lead of claim 101, wherein the sleeve-like member is cut to define the window.

103. (New) The lead of claim 89, wherein the lead body has a diameter of approximately 1.1 to 1.5 mm and the electrode has a length, extending longitudinally relative to the lead body, of approximately 1.3 to 1.7 mm.

REMARKS

1. Status of Claims

The claim amendments are shown based on the understanding that the Supplemental Amendment dated May 24, 2006 was entered. Following this amendment, claims 1-88 and 90 are canceled without prejudice or admission, and claim 89 is amended by the addition of language from claim 90, which is now canceled. New claims 92-103 were prepared by copying the language of claims 10-12, 2, 6, 85-87, 81-83 and 88, respectively, of this application as such claims stood following the Supplemental Amendment dated May 24, 2006. Of the copied claims, only claim 85 was not ultimately dependent upon one of claims 89-91 following the Supplemental Amendment. (The language of claim 85 is now provided in new claim 97.) Upon entry of this amendment, claims 89 and 91-103 remain pending.

2. Authorization to Charge Fees

It is believed that no fees are required in connection with this paper, which does not add claims and does not rewrite dependent claims into independent form. If this belief is incorrect, please charge any fees required in connection with this paper to Deposit Account 13-2546.

In view of the foregoing amendments, reconsideration and allowance of this application are requested.

Respectfully submitted,

Date: July 26, 2006

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